

NOTES ON *HELIX NEMORALIS* AT LEXINGTON, VIRGINIA

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Helix nemoralis Linné was introduced at Lexington, Virginia, in 1883 from Europe. The new colony found the residual limestone soil of the region a most suitable environment and in succeeding years the colony has spread so that its present areal extent is several square miles.

In 1930 the writer made collections at Lexington in order to determine what changes had taken place since Jas. Lewis Howe recorded the frequencies of the patterns in 1898. These data have been assembled [*Am. Nat.*, 69, 614-620, 1935], but no mention was made of the association of the reddish (or pinkish) ground color with the various patterns.

Of the three series which were examined, *X* was the largest (770 specimens) and was taken near the place of introduction. The frequency of the snails with a reddish ground in this series was 3.9 per cent. Series *Y* was taken about one-half mile south of the place of introduction and consisted of 244 specimens. The frequency of the red shells in series *Y* was 7.4%. In series *Z*, which was taken almost a mile southwest of the place of introduction and was composed of 539 specimens, the red shells were entirely absent.

Howe [*Am. Nat.*, 32, 913-923, 1898] found the variety *rubella* (pink ground) associated chiefly with pattern 00300. Among the 1552 specimens examined in 1930, the association was: 00000, 22 specimens, 6 of which were in series *X* and 16 in *Y*; 00300, 18, 17 in *X* and one in *Y*; 12345, 4, all in *X*; and one each for patterns 123(45), in *X*; ₁23(45), in *X*; 02₃00, in *X* and 003(45), in *Y*.

The red (or pink) ground is more frequent among the three least intricate patterns, but this is not surprising since the frequencies of these patterns, regardless of ground color was:

Band pattern	00000	00300	12345
Series <i>X</i>	19.7%	21.1	17.5
Series <i>Y</i>	47.9	1.2	16.0
Series <i>Z</i>	39.7	1.5	24.0

An observation most difficult to interpret is the absence of the red ground in series *Z*.

OVOVIVIPARITY AMONG MOLLUSKS

BY HENRY VAN DER SCHALIE

While working with a series of fresh-water shells from the Department of Peten in Guatemala it was found that two of the species, both new to science, namely, *Somatogyrus clenchi* and *Cochliopa francesca*, were ovoviviparous. This was particularly striking since, so far as could be determined, this phenomenon has never before been reported for any of the species belonging to the genus *Cochliopa*, and it is only the second time it has been found among species belonging to the genus *Somatogyrus*.¹ In checking through the literature it soon became obvious that, though there are a number of scattered records noting the occurrence of ovoviviparity, there are relatively few publications which deal with the subject in anything but a cursory way. Consequently, an attempt will be made to tabulate briefly such scattered information as was available in the hope that gradually we might arrive at a better understanding of the occurrence and probable significance of this phenomenon among the mollusks.

The lack of uniformity in the use of the terms oviparous, ovoviviparous, and viviparous is a matter of immediate concern. The confusion is somewhat justified since in nature we do not have a sharp separation between some of these processes, and there are cases where it would be difficult to apply any one of them consistently. Though in most instances what is meant is obvious, even when the terms are technically misapplied, it would be well if we first define these terms:

Oviparous: It is proposed that this term be applied to all cases where the eggs are extruded, whether they are fertilized externally or internally.

Ovoviviparous: This is to be applied to any group which hatches its young from the egg before expelling it. This term should obviously be applied in many instances where *viviparous* is used.

¹ Walker (1904, p. 140) found *Somatogyrus georgianus* to be ovoviviparous.